

# **[SIGNAL FREQUENCY SPLITTER AND FREQUENCY SHIFT KEY DECODING APPARATUS USING THE SAME]**

## **Abstract of Disclosure**

A frequency shift key decoding apparatus, having a frequency divider, a signal frequency splitter, and a demodulator. The signal frequency splitter has a frequency synthesizer,  $(n-1)$  first mixers,  $n$  second mixers, and  $n$  filters, where  $n$  is an integer equal to or larger than 2. The present invention can be applied to a multi-function wireless receiver that supports multiple peripherals. Since a plurality of local carrier signals is generated by only  $(n-1)$  mixers, the frequency of the local carrier signals can be randomly changed. As the mixers occupy a very small area of the integrated circuit chip, the fabrication cost is low. Further, since the mixers are easily implemented using a digital circuit, the frequency shift key decoding apparatus, and even the whole wireless receiver can be implemented in a single chip.

Figures

Figure 1: A line graph showing the trend of data over time. The x-axis represents time in years, and the y-axis represents the value of the data. The graph shows a steady increase in the data over the period shown.

Figure 2: A bar chart showing the distribution of data across different categories. The x-axis lists the categories, and the y-axis shows the frequency or count for each category. The bars are colored in a consistent manner.

Figure 3: A pie chart showing the proportion of data for different categories. The chart is divided into segments representing the relative size of each category.

Figure 4: A scatter plot showing the relationship between two variables. The x-axis and y-axis represent the variables, and the data points are plotted to show a positive correlation.

Figure 5: A flowchart illustrating a process or system. The flow starts from a single point and branches out into different paths, eventually leading to a final outcome.

Figure 6: A map showing the geographical distribution of data. The map includes labels for different regions and shows the concentration of data in specific areas.

Figure 7: A table summarizing the data presented in the figures. The table has columns for the figure number, the type of figure, and the key findings.

Figure 8: A diagram showing the components of a system. The components are arranged in a hierarchical structure, with the main system at the top and sub-components below.

Figure 9: A graph showing the change in data over time. The x-axis represents time, and the y-axis represents the data value. The graph shows a fluctuating trend.

Figure 10: A chart showing the distribution of data across different categories. The x-axis lists the categories, and the y-axis shows the frequency or count for each category.

Figure 11: A pie chart showing the proportion of data for different categories. The chart is divided into segments representing the relative size of each category.

Figure 12: A scatter plot showing the relationship between two variables. The x-axis and y-axis represent the variables, and the data points are plotted to show a positive correlation.

Figure 13: A flowchart illustrating a process or system. The flow starts from a single point and branches out into different paths, eventually leading to a final outcome.

Figure 14: A map showing the geographical distribution of data. The map includes labels for different regions and shows the concentration of data in specific areas.

Figure 15: A table summarizing the data presented in the figures. The table has columns for the figure number, the type of figure, and the key findings.

Figure 16: A diagram showing the components of a system. The components are arranged in a hierarchical structure, with the main system at the top and sub-components below.

Figure 17: A graph showing the change in data over time. The x-axis represents time, and the y-axis represents the data value. The graph shows a fluctuating trend.

Figure 18: A chart showing the distribution of data across different categories. The x-axis lists the categories, and the y-axis shows the frequency or count for each category.

Figure 19: A pie chart showing the proportion of data for different categories. The chart is divided into segments representing the relative size of each category.

Figure 20: A scatter plot showing the relationship between two variables. The x-axis and y-axis represent the variables, and the data points are plotted to show a positive correlation.

Figure 21: A flowchart illustrating a process or system. The flow starts from a single point and branches out into different paths, eventually leading to a final outcome.

Figure 22: A map showing the geographical distribution of data. The map includes labels for different regions and shows the concentration of data in specific areas.